



## TechNJ Digital Government Summit Pt. 3

Podcasting monthly from the shores of the Delaware River in Trenton, New Jersey, this is TechNJ, Powered by NJOIT - the New Jersey Office of Information Technology. Follow and listen to discussions on a variety of tech issues, trends and topics with industry leaders and up-and-coming influencers to find where technology meets public service in New Jersey.

JS: Hello, I'm John Silvestri. Welcome to TechNJ. We are back for a third and final episode here at the 2017 New Jersey Digital Government Summit. Today, we have two special guests - Dr. Edward Chapel of NJEdge and Dr. Rashmi Jain of Montclair State University's School of Business. We're starting today with Dr. Ed Chapel, Senior Vice President and COO of NJEdge. Thank you for joining us here on TechNJ.

EC: Oh, my pleasure, my pleasure.

JS: So, can you tell us a little bit about NJEdge?

EC: NJEdge - it's a part of New Jersey technology for quite a period of time now. It was created back around the year 2000, and it was designed to answer a very simple problem. Higher education institutions recognize the enormous learning and research and academic potential of the internet and Internet2, and they recognize that almost every institution in the state would be hard-pressed to afford a connection suitable for doing the education business. So, we created a consortium to bring it to higher ed, and to share the resource, and it's been the beginning of a great, great program ever since.

JS: You mentioned the technologies internet and Internet2. Can you explain a little bit the difference between internet and Internet2?

EC: Well, sure. You know, the internet is highly commoditized. There's a lot of commercial providers and commercial activity on it, and anyone can enter in any way they want for whatever reason they want. It is wide open, and it's a free-for-all and that's good in a Democratic Society. Internet2 is a purpose-built dedicated network for facilitating special-purpose research, education, certain types of corporate activity, and it's a restricted-use and restricted access platform that serves very particular sectors of society. The benefit is that research can be conducted without all the noise, all the interruptions, all the peaks and valleys of user activity that occur in the commodity internet. Guaranteed quality of service and user experience.

JS: So you're here at the NJ Digital Summit. Have you enjoyed your time here so far?

EC: (Jokingly) Is that where we are?

JS: Yeah, we are at the NJ Digital Summit, here in the Lafayette Park Hotel in Trenton New Jersey, sir!

EC: Yes, I've come to this summit for any number of years now. I'm proud to say I'm a member of the advisory board for the event, and the event really has got a first rate agenda year in and year out. And because it's focused on New Jersey and New Jersey government, all of the sessions are really a great fit for learning what you need to learn, and also seeing the world of individuals in government service in the State of New Jersey through the various prisms of the players here, and I value that opportunity very much. Hearing the folks who are here talk about what they do, how they do it, and how their challenged.

JS: Has any particular speaker caught your ear?

EC: Well, you know, I got a big kick out of the opening address in the morning. You know, I'm, I'm counting my minutes differently now than I used to. That was a great, great presentation. And, you know, really good and helpful messages for anybody who's trying to sort through the virtual tsunami of things you need to know, things you need to learn, things you got to do, you know, so it was very, very helpful. The other one was really the session on now this whole notion of public domain data that was discussed over lunch. As NJEdge, we are connecting so many people already, so as I listened I said, "Oh my gosh! These are wonderful resources! These are raw materials for teaching and learning the next generation of data scientist! These are raw materials for the members of the State of New Jersey to visit our site, and we're going to connect to it, I'm sure. So that's a great movement in the democratization of information in the State of New Jersey

JS: Well Ed, thank you for joining us here on TechNJ. It's been a pleasure talking with you, and I hope you enjoy the rest of the Digital Summit today.

EC: Thank you very much, it was a pleasure

JS: Up next, I'm sitting down with Dr. Rashmi Jain, Department Chair and Professor of Information and Operations Management at the Feliciano School of Business at Montclair State University. Doctor Jain, thank you for joining us today here on TechNJ.

RJ: Thank you for having me.

JS: So, you're here at the NJ Digital Summit. How have you been doing the summit so far?

RJ: This summit is really wonderful because it brings together all the information technology professionals from the different New Jersey government agencies. And I've been speaking at this event the last few years, and usually it's been related to big data and business analytics.

JS: Yeah, as a matter of fact your speech today was on big data and what to do with it. So, I guess that kind of asks my question for me... what is big data, and what do we do with it?

RJ: Big data, as the term is self-explanatory, is talking about volumes of magnitude of large-size data sets, but usually be described big data in terms of its characteristics, which is usually you'll hear people talk about volume, velocity, variety and veracity. So, which is basically how big it is, how frequent and how fast it comes, what kinds of different formats do you want the data, or does it come so structured, unstructured pictures, video, audio... all of that. And, the outcome of those is that you get data, which is what we call veracity, which means there is a lot of unpredictability and uncertainty and whether... what happens if it's not coming at the frequency that you want, and, you know, if you talking about live streaming data, and it suddenly stops, or if you get data which is corrupt, data which is incomplete. You know, having gaps. So, it's the characteristics of data which makes it not just big in size, but also from those perspectives as well.

JS: From a complexity perspective.

RJ: Complexity, yes.

JS: Where's all this data coming from? I mean, I know I have a cell phone. I know I go on my computer at home...

RJ: Yeah.

JS: Where's all the data coming from?

RJ: You said it then. Look at what we've been doing since the internet came about, and since we got down to the idea of a website. It's not that long ago, I mean, about 10-15 years, when the every retail store, every company came up with their website, and we've been doing so much of electronic commerce, Ecommerce, and electronic trading platforms in the financial services. So, everything that we've been doing on the internet, and now, moreso, with the social media, and all those apps that we have on her mobile phone. So, mobility, the iot, internet of things, which is basically everything connected to everything else. Whether it is your bag that you check in, whether it is the transportation of goods, whether it is supply chain, whether it is, you know, anything that has a barcode or a sensor is a piece of the internet now. And that's what we call Internet of Things. So, imagine the data coming from all these different sources, and that is what creates the... the big data... well, swamped that we are in.

JS: So, now all of our shopping, all of our social media is now big data. What are governments doing with it? What are companies doing with it? What happens to all this data? Does it just sit in the warehouse on the shelf, or is it being used?

RJ: There are two approaches that companies take to it, right? The moment you store it, now you have a liability of managing it. Especially, you know, personal information, which is proprietary. So, when we say that healthcare is an area where a lot of data analytics can bring value. You know, I presented in the session that there is a potential for saving at least \$1,000

per person if you can apply analytics in on the data that we've collected in healthcare. But healthcare data it is so sensitive. We have to be so careful how we manage that data, how we analyze data, in whose hands do we trust it. So there are privacy issues, there are proprietary data issues that we just cannot hand it over to a group of analysts or subject matter experts and say, " Here you go, now analyze the trends and tell me who's doing what, and who are our high risk cities, and which hospitals are doing well, and which doctors are doing...", you can't do that, right? So that's the nature of the problem is that wherever the data is of utmost value, but we are not doing it, we are not able to leverage the potential because of these issues of privacy. And companies, if they collect data, they have to be very careful with it. The data that you collect has to be used for the purpose for which you collect it, right?

JS: Right. Is this a question of security as far as, you know, technical security, technological security. Or is this more something that's handled via regulation and legislation of saying, "This data set... okay, you can share this, but you have to make sure, maybe this other thing is anonymous..."?

RJ: There are some policies and some regulations that govern the privacy of health data, but it is not to a point where... I mean, you've heard about HIPA, and some of these other... which has kind of brought in some transparency to the... how the data is handled. But at the same time, we are not at the point where we can, you know, say that, "Okay, now all data is available for analytics, and it's all anonymous, and it has been cleaned up to a point where now the individual's identity will not be disclosed". It's very hard to say that at this point. I think the maturity of the data, big data, and data analytics field is such where we are really not ready to handle data in a safe manner, and say that everybody is protected whoever's data is in it.

JS: That's kind of astounding when you think about the amount of data that's been generated. You describing it earlier, and now you're telling me that we don't know how to handle it, it's almost kind of scary. You've heard about these breaks, just in the retail sector...

RJ: Right.

JS: Where people lose credit cards, or somebody lose the laptop...

RJ: Yeah.

JS: The government where they had a bunch of social security numbers...

RJ: So, I think we thought that technologies will solve a problem, but having been in the technology field for so many years, I can tell you that we have to first understand how to use the technologies for the business processes that we are handling. Whether it is a process related to transactions, process related to billing or customer database. So, if we can first fix up processes and how we deal with the data, and then look at the technologies. But, for some reason, it's so easy to just jump at the technology.

JS: Everybody wants the latest and greatest.

RJ: Yeah.

JS: Dr. Jain, you've been here at the NJ Digital Summit all day, and we are going on till tomorrow. What has appealed to you about the NJ Digital Summit?

RJ: It's a great forum for the users of the digital world to be assembling here, and at the same time, we have companies who are really at the cutting edge of solutions. So, this is a wonderful forum where everyone, every year, we come together in this hotel, and I think it's great to get the companies to come in share the latest technologies, and latest platforms of solving business problems and also government solutions. So, I think there've been great speakers, you know, the keynotes were great. It always brings so many IT professional from the State of New Jersey, it's amazing. Every time we run out of space in the big auditorium during the lunch break and other thing.

JS: Well Dr. Jain, I want to thank you for taking out the time of your day to come and talk with us here at TechNJ. I hope to have you on again here on TechNJ, your wonderful, you have a lot of good information to distribute. Thank you very much for being on the show.

RJ: Thank you for having me, John.

JS: Thank you again to both our guests on this special episode of TechNJ from the 2017 New Jersey Digital Government Summit. If you have any comments or suggestions for us here TechNJ, please shoot us an email to [podcast@tech.nj.gov](mailto:podcast@tech.nj.gov) and check out our website at [tech.nj.gov](http://tech.nj.gov). From all of us here at TechNJ, I'm John Silvestri. Thanks for listening, we'll catch you next time.